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NEWS 3 May 12 EXTEND option available in structure searching
NEWS 4 May 12 Polymer links for the POLYLINK command completed in REGISTRY
NEWS 5 May 27 New UPM (Update Code Maximum) field for more efficient patent SDIs in CPlus
NEWS 6 May 27 CPlus super roles and document types searchable in REGISTRY
NEWS 7 Jun 28 Additional enzyme-catalyzed reactions added to CASREACT
NEWS 8 Jun 28 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG, and WATER from CSA now available on STN(R)
NEWS 9 Jul 12 BEILSTEIN enhanced with new display and select options, resulting in a closer connection to BABS
NEWS 10 Jul 30 BEILSTEIN on STN workshop to be held August 24 in conjunction with the 228th ACS National Meeting
NEWS 11 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display fields
NEWS 12 AUG 02 CPlus and CA patent records enhanced with European and Japan Patent Office Classifications
NEWS 13 AUG 02 STN User Update to be held August 22 in conjunction with the 228th ACS National Meeting
NEWS 14 AUG 02 The Analysis Edition of STN Express with Discover! (Version 7.01 for Windows) now available

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 14:05:30 ON 02 AUG 2004

=> file reg

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.63	0.63

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 14:07:10 ON 02 AUG 2004

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h eb c g cg b cg

eb

STRUCTURE FILE UPDATES: 1 AUG 2004 HIGHEST RN 720662-84-0
DICTIONARY FILE UPDATES: 1 AUG 2004 HIGHEST RN 720662-84-0

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

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L1 STRUCTURE UPLOADED

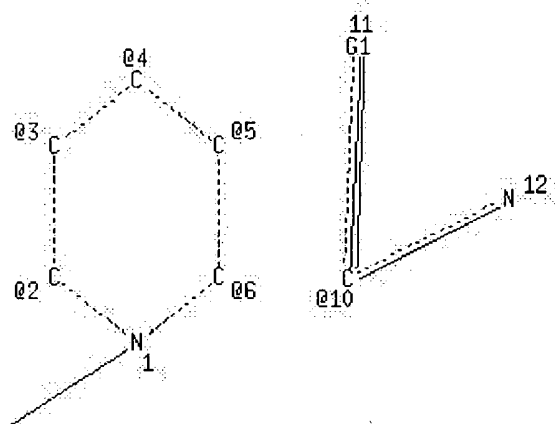
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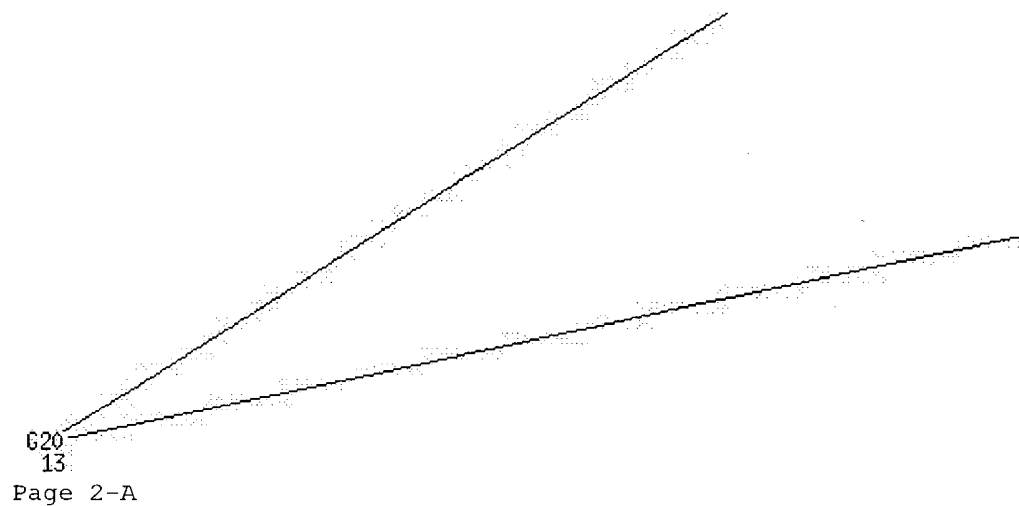
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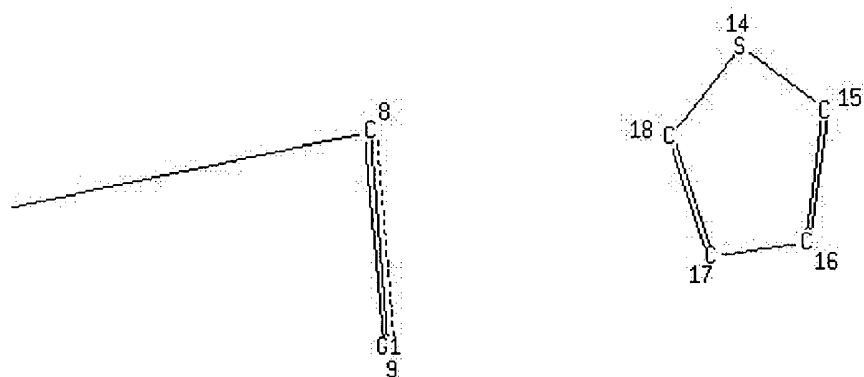
Page 1-A



7 CM2
Page 1-B



Page 2-A



Page 2-B
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REP G20=(1-2) 7-1 7-8
VPA 10-2/3/4/5/6 S
NODE ATTRIBUTES:
HCOUNT IS M2 AT 7
NSPEC IS R AT 1
NSPEC IS R AT 2

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eb

NSPEC IS R AT 3
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

=> s l1

SAMPLE SEARCH INITIATED 14:10:18 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 46 TO ITERATE

100.0% PROCESSED 46 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 514 TO 1326

PROJECTED ANSWERS: 3 TO 163

L2 3 SEA SSS SAM L1

=> s l1 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 14:10:22 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 932 TO ITERATE

100.0% PROCESSED 932 ITERATIONS

55 ANSWERS

SEARCH TIME: 00.00.01

L3 55 SEA SSS FUL L1

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

157.10

157.73

FILE 'HCAPLUS' ENTERED AT 14:10:24 ON 02 AUG 2004

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h eb c g cg b cg

eb

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FILE COVERS 1907 - 2 Aug 2004 VOL 141 ISS 6
FILE LAST UPDATED: 1 Aug 2004 (20040801/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 8 L3

=> s l4 and sankaranarayanan, a?/au
65 SANKARANARAYANAN, A?/AU

L5 8 L4 AND SANKARANARAYANAN, A?/AU

=> d l4, ibib abs fhitstr, 1-8

L4 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	References
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ACCESSION NUMBER: 2003:317444 HCAPLUS
DOCUMENT NUMBER: 138:343853
TITLE: Preparation of compositions containing pyridinium derivatives for cosmetic and therapeutic applications
INVENTOR(S): Sankaranarayanan, Alangudi
PATENT ASSIGNEE(S): Torrent Pharmaceuticals Ltd., India
SOURCE: Eur. Pat. Appl., 104 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1304101	A1	20030423	EP 2001-204295	20011112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
AU 766824	B2	20031023	AU 2001-31376	20010328
AU 2001031376	A5	20021003		
JP 2003137783	A2	20030514	JP 2001-344128	20011109
CN 1411809	A	20030423	CN 2001-137440	20011112
CN 1411800	A	20030423	CN 2001-137441	20011112
PRIORITY APPLN. INFO.:			IN 2001-CA605	A 20011019
			IN 2001-CA620	A 20011101

OTHER SOURCE(S): MARPAT 138:343853

AB The invention discloses a new class of compds. particularly pyridinium derivs., which have been found to exhibit triple function of a free

radical scavenger (antioxidant), AGE (advanced glycation end product) breaker and AGE inhibitor, and cosmetic compn. comprising these compds. contained in a cosmetically acceptable carrier. The invention also discloses a method of cosmetic application by applying such compns. The invention further discloses a pharmaceutical compn., comprising the compds. useful in scavenging free radicals from the body cells of a mammal, a method of scavenging free radicals from the body cells of a mammal and a method of treating of diseases caused by accumulation of free radicals in the body cells of a mammal by administering a compn. made with the compds. The invention in addn., also discloses compn. and method for inhibiting AGE in a mammal by use of the compds. of the same group. Thus, a compn. contained pyridinium compd. 0.25, oleic acid 10.0, propylene glycol 70.0, Tween-80 0.1, and EtOH qs to 100.0%.

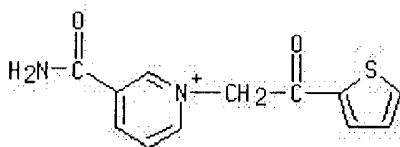
IT **333797-27-6P**

RL: COS (Cosmetic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of compns. contg. pyridinium derivs. for cosmetic and therapeutic applications)

RN **333797-27-6** HCAPLUS

CN Pyridinium, 3-(aminocarbonyl)-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI)
(CA INDEX NAME)

# Br⁻

REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text
References

ACCESSION NUMBER:

2003:118597 HCAPLUS

DOCUMENT NUMBER:

138:153445

TITLE:

Preparation of N-oxoethylpyridinium compounds for the management of age-related and diabetic vascular complications

INVENTOR(S):

Sankaranarayanan, Alangudi

PATENT ASSIGNEE(S):

Torrent Pharmaceuticals Ltd., India

SOURCE:

U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of U. S. Ser. No. 801,778, abandoned.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003032660	A1	20030213	US 2001-939702	20010828
US 6608094	B2	20030819		
WO 2001025208	A1	20010412	WO 1999-IB1683	19991015

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,

h

eb c

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cg

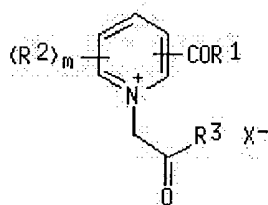
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CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
 IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
 MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
 SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6462057 B1 20021008 US 2000-598410 20000621
 US 2001018524 A1 20010830 US 2001-801778 20010309
 US 2002103228 A1 20020801 US 2001-995731 20011129
 PRIORITY APPLN. INFO.: IN 1999-CA828 A 19991006
 WO 1999-IB1683 A2 19991015
 US 2000-598410 A2 20000621
 US 2001-801778 B2 20010309
 IN 1999-CA827 A 19991006
 WO 1999-IB1687 A1 19991015
 US 2000-590143 A2 20000609
 US 2001-939702 A1 20010828

09/801,778^{ADD}

OTHER SOURCE(S): MARPAT 138:153445
 GI



09551740

AB Title compds. [I; R1 = R4R5, NR7NR7R9; R2 = F, Cl, Br, iodo, acyl, CONR7R10, CO2R7, NR7R10, SR7, etc.; R3 = R7, OR7, NR7R10, N:CR7R10, etc.; R4 = NR7R6O, NR7R6NR7, OR6O, OR6NR7; R6 = alkyl; R5 = alkyl aryl, heteroaryl, COR7, SO2R7, CSNHR7, C(NH)NHR7, COR10, etc.; R7 = H, alkyl, aryl, heteroaryl; R9 = H, alkyl, aryl, heteroaryl, COR10, SO2R10, etc.; R10 = H, alkyl, aryl, heteroaryl; X = halide, OAc, ClO4, BF4, PF6, etc.; m = 0-2; with provisos], were prepd. Thus, N,N'-bis(nicotinyl)hydrazine and phenacyl bromide were refluxed 6 h in MeOH/iPrOH to give 60% N,N'-bis[3-carbonyl-1-(2-phenyl-2-oxoethyl)pyridinium]hydrazine dibromide. Tested I gave 13-92.64% advanced glycation end product (AGE) breaking at 1-50 mM. Novel compds. of the pyridinium series useful for the management of diabetes and aging-related vascular and neurovascular complications, including kidney disease, nerve damage, atherosclerosis, retinopathy, inflammatory disorders, immunol. disorders, oxidative stress, dermatol. disorders and discoloration of teeth, by breaking preformed AGE, of the general formula I, or pharmaceutically acceptable salts thereof, wherein, R1, R2, R3, X and m are as defined in the specification.

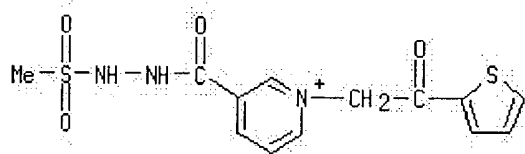
IT 333797-94-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(claimed compd.; prepn. of N-oxoethylpyridinium compds. for the management of age-related and diabetic vascular complications)

RN 333797-94-7 HCAPLUS

CN Pyridinium, 3-[[2-(methylsulfonyl)hydrazino]carbonyl]-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI) (CA INDEX NAME)

# Br⁻

L4 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

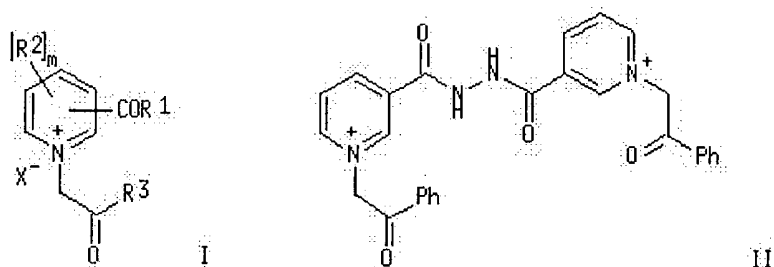
Full Text	Chemical References
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ACCESSION NUMBER: 2002:770131 HCAPLUS
 DOCUMENT NUMBER: 137:279097
 TITLE: Preparation of novel pyridinium compounds for the management of aging-related and diabetic vascular complications
 INVENTOR(S): Sankaranarayanan, Alangudi
 PATENT ASSIGNEE(S): Torrent Pharmaceuticals, Ltd., India
 SOURCE: U.S., 10 pp., Cont.-in-part of WO 2001 25,208.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6462057 - <i>no</i>	B1	20021008	US 2000-598410	20000621
WO 2001025208	A1	20010412	WO 1999-IB1683	19991015
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001018524 - <i>no</i>	A1	20010830	US 2001-801778	20010309
US 2003032660 - <i>no</i>	A1	20030213	US 2001-939702	20010828
US 6608094 - <i>already</i>	B2	20030819		
US 2002103228 - <i>no</i>	A1	20020801	US 2001-995731	20011129
US 2003092744	A1	20030515	US 2002-214704	20020809
US 6624178	B2	20030923		
PRIORITY APPLN. INFO.:			IN 1999-CA828	A 19991006
			WO 1999-IB1683	A2 19991015
			IN 1999-CA827	A 19991006
			WO 1999-IB1687	A1 19991015
			US 2000-590143	A2 20000609
			US 2000-598410	A2 20000621
			US 2001-801778	B2 20010309
			US 2001-939702	A1 20010828

Same #0214704

OTHER SOURCE(S): MARPAT 137:279097
 GI



AB The title compds. [I; R1 = (un)substituted hydrazino, 2-benzyloxyethoxy, 2-benzyloxyethylamino, etc.; R2 = halo, NO₂, alkyl, etc.; R3 = 2-thienyl, phenylamino, Ph, etc.; X = halide, acetate, perchlorate, etc.; m = 0-2; with the provisos], useful for the management of diabetes and aging-related vascular complications, including kidney disease, nerve damage, atherosclerosis, retinopathy, dermatol. disorders and discoloration of teeth, by breaking preformed AGE, were prepd. and formulated. Thus, reacting N,N'-bis-(nicotinoyl)hydrazine with phenacyl bromide in MeOH/iso-PROH afforded 60% II.2Br⁻ which showed 13% AGE breakage at 5 mM. Also disclosed is a method of treatment of a diabetic patient by administering the compds. as defined above, either singly or in combination with drugs for antidiabetic therapy.

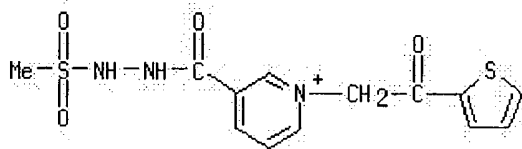
IT **333797-94-7P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of novel pyridinium compds. for treating diseases caused by diabetes and aging related complications)

RN **333797-94-7** HCAPLUS

CN Pyridinium, 3-[[2-(methylsulfonyl)hydrazino]carbonyl]-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI) (CA INDEX NAME)



Br⁻

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text References

ACCESSION NUMBER: 2002:733981 HCAPLUS

DOCUMENT NUMBER: 137:247608

TITLE: Preparation of pyridinium compounds useful for the treatment of advanced glycation end product (AGE)-related diseases

INVENTOR(S): Sankaranarayanan, Alangudi

PATENT ASSIGNEE(S): Torrent Pharmaceuticals Ltd., India

SOURCE: Eur. Pat. Appl., 42 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

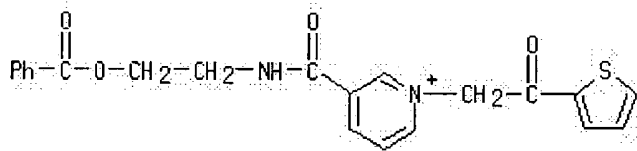
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EP 1243581	A1	20020925	EP 2001-201057	20010321
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JP 2002275158	A2	20020925	JP 2001-81819	20010322
CN 1377880	A	20021106	CN 2001-112413	20010330
PRIORITY APPLN. INFO.:			EP 2001-201057	A 20010321

AB Disclosed are novel pyridinium compds. useful for the management of diabetes and aging-related vascular complications, including kidney disease, nerve damage, atherosclerosis, retinopathy, dermatol. disorders and discoloration of teeth. Thus, N-benzenesulfonylisonicotinic hydrazide and EtO₂CCH₂Br were refluxed 24 h in Me₂CHOH to give 60% 1-(2-ethoxy-2-oxoethyl)-4-(phenylsulfonylhydrazinocarbonyl)pyridinium bromide. Title compds. showed 14-95.36% AGE-breaking activity at 1-25 mM.

IT 333798-06-4P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (claimed compd.; prepn. of pyridinium compds. useful for treatment of advanced glycation end product (AGE)-related diseases)

RN 333798-06-4 HCAPLUS

CN Pyridinium, 3-[[[2-(benzoyloxy)ethyl]amino]carbonyl]-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI) (CA INDEX NAME)

# Br⁻

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Cited References
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ACCESSION NUMBER: 2002:727098 HCAPLUS

DOCUMENT NUMBER: 137:247606

TITLE: Preparation of oxoethylpyridinium halides having AGE breaking activity for treatment of senile disease and complication of diabetes

INVENTOR(S): Sankaranarayanan, Alangudi

PATENT ASSIGNEE(S): Trent Pharmaceuticals Limited., India

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002275158

A2

20020925

JP 2001-81819

20010322

EP 1243581

A1

20020925

EP 2001-201057

20010321

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

EP 2001-201057

A 20010321

OTHER SOURCE(S):

MARPAT 137:247606

AB N,N'-bis[3-carbonyl-1-(2-thien-2'-yl-2-oxoethyl)pyridinium]hydrazine dichloride, N,N'-bis[3-carbonyl-1-(2-cyclopropylamino-2-oxoethyl)pyridinium]hydrazine dichloride, 1-(2-phenylamino-2-oxoethyl)-4-(phenylsulfonylhydrazinocarbonyl)pyridinium chloride or its pharmaceutically acceptable salt, 1-[2-(2',4'-dichlorophenyl)-2-oxoethyl]-3-[2-(methoxy)ethyloxycarbonyl]pyridinium bromide or its pharmaceutically acceptable salt, 1-(2-phenylamino-2-oxoethyl)-3-[(benzoyloxy)ethylaminocarbonyl]pyridinium chloride or its pharmaceutically acceptable salt, and other oxoethylpyridinium halides are prepd. The compds. are useful for treatment of senile disease and complication of diabetes as renal disease, nerve damage, retinopathy, atherosclerosis, microangiopathy, endodermis function disorder, and teeth discoloration. N-(benzenesulfonyl)isonicotinic acid hydrazide (1.0 g) was treated with 0.6 g Et bromoacetate in iso-PrOH under reflux for 24 h to give 1.05 g 1-(2-ethoxy-2-oxoethyl)-4-(phenylsulfonylhydrazinocarbonyl)pyridinium bromide. The compds. showed good breaking activity. at 1-20 mM concn.

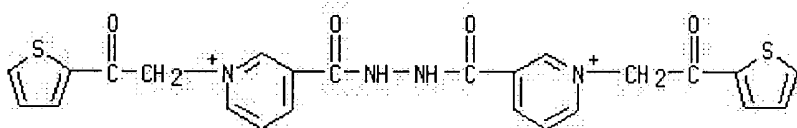
IT 333797-95-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of oxoethylpyridinium halides having AGE breaking activity for treatment of senile disease and complication of diabetes)

RN 333797-95-8 HCAPLUS

CN Pyridinium, 3,3'-(hydrazodicarbonyl)bis[1-[2-oxo-2-(2-thienyl)ethyl]-, dibromide (9CI) (CA INDEX NAME)

# 2 Br⁻

L4 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full
Text

Comp
References

ACCESSION NUMBER: 2001:643433 HCAPLUS

DOCUMENT NUMBER: 135:210943

TITLE: Preparation of novel pyridinium compounds for the management of aging-related and diabetic vascular complications

INVENTOR(S): Sankaranarayanan, Alangudi

PATENT ASSIGNEE(S): India

SOURCE: U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 598,410.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

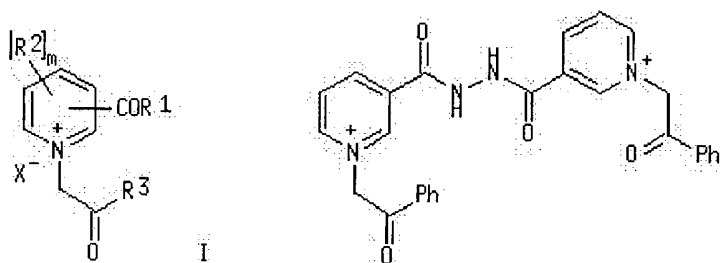
PATENT INFORMATION:

h eb c g cg b cg

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001018524	A1	20010830	US 2001-801778	20010309
WO 2001025208	A1	20010412	WO 1999-IB1683	19991015
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6462057	B1	20021008	US 2000-598410	20000621
US 2003032660	A1	20030213	US 2001-939702	20010828
US 6608094	B2	20030819		
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PRIORITY APPLN. INFO.:				
			IN 1999-CA828	A 19991006
			WO 1999-IB1683	A2 19991015
			US 2000-598410	A2 20000621
			IN 1999-CA827	A 19991006
			WO 1999-IB1687	A1 19991015
			US 2000-590143	A2 20000609
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			US 2001-939702	A1 20010828

OTHER SOURCE(S): MARPAT 135:210943
GI

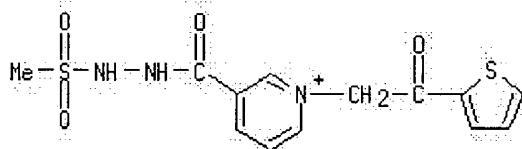


AB The title compds. [I; R1 = (un)substituted hydrazino, 2-benzyloxyethoxy, 2-benzyloxyethylamino, etc.; R2 = halo, NO₂, alkyl, etc.; R3 = 2-thienyl, phenylamino, Ph, etc.; X = halide, acetate, perchlorate, etc.; m = 0-2], useful for the management of diabetes and aging-related vascular complications, including kidney disease, nerve damage, atherosclerosis, retinopathy, dermatol. disorders and discoloration of teeth, by breaking preformed AGE, were prepd. Thus, reacting N,N'-bis-(nicotinoyl)hydrazine with phenacyl bromide in MeOH/iso-PrOH afforded 60% II.2Br- which showed 13% AGE breakage at 5 mM. Also disclosed is a method of treatment of a diabetic patient by administering the compds. as defined above, either singly or in combination with drugs for antidiabetic therapy.

IT **333797-94-7P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of novel pyridinium compds. for the management of aging-related and diabetic vascular complications)

RN 333797-94-7 HCAPLUS
 CN Pyridinium, 3-[[2-(methylsulfonyl)hydrazino]carbonyl]-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI) (CA INDEX NAME)



Br⁻

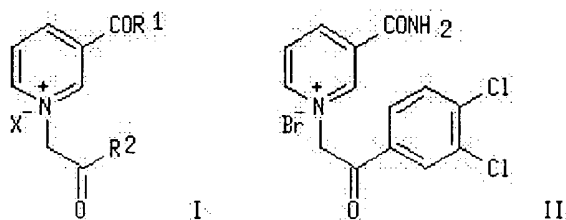
L4 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full
Text

Chemical
References

ACCESSION NUMBER: 2001:265393 HCAPLUS
 DOCUMENT NUMBER: 134:280716
 TITLE: Preparation of pyridinium derivatives for the treatment of diabetic and aging-related vascular complications
 INVENTOR(S): Sankaranarayanan, Alangudi
 PATENT ASSIGNEE(S): India
 SOURCE: PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025209	A1	20010412	WO 1999-IB1687	19991015
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9959944	A1	20010510	AU 1999-59944	19991015
EP 1220843	A1	20020710	EP 1999-974071	19991015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
BR 9915962	A	20030107	BR 1999-15962	19991015
JP 2003511370	T2	20030325	JP 2001-528155	19991015
US 2002103228	A1	20020801	US 2001-995731	20011129
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			IN 1999-CA827	A 19991006
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			US 2000-590143	A2 20000609
			US 2000-598410	A2 20000621
			US 2001-801778	A2 20010309
			US 2001-939702	A1 20010828
OTHER SOURCE(S):			MARPAT 134:280716	
GI				



AB The title compds. [I; R1 = YR3 (wherein Y = O, NH; R3 = H, alkyl, aryl); R2 = alkyl, O(alkyl), aryl, etc.; X = halide, acetate, perchlorate], useful for the management of diabetes and aging-related vascular complications, and particularly in the treatment of complications of diabetes mellitus and other aging-related conditions including kidney disease, nerve damage, atherosclerosis, retinopathy, dermatol. conditions and discoloration of teeth by breaking preformed AGE, were prepd. and formulated. Thus, reacting nicotinamide with 2,4-dichlorophenacyl bromide in refluxing PhMe afforded 39% the bromide II. Biol. data for compds. I (such as % AGE breaking activity) was given. The invention further discloses a method of treatment of a diabetic patient by administering the compds. I, either singly or in combination with other drugs for antidiabetic therapy.

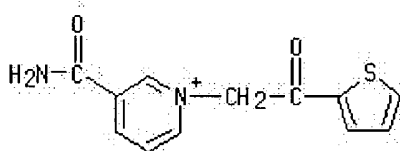
IT **333797-27-6P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of pyridinium derivs. for the treatment of diabetic and aging-related vascular complications)

RN 333797-27-6 HCAPLUS

CN Pyridinium, 3-(aminocarbonyl)-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI)
(CA INDEX NAME)



Br⁻

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text ☐ ☒ References

ACCESSION NUMBER: 2001:265392 HCAPLUS

DOCUMENT NUMBER: 134:280715

TITLE: Preparation of novel pyridinium derivatives for the management of aging-related and diabetic vascular complications

INVENTOR(S): Sankaranarayanan, Alangudi

PATENT ASSIGNEE(S): India

SOURCE: PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

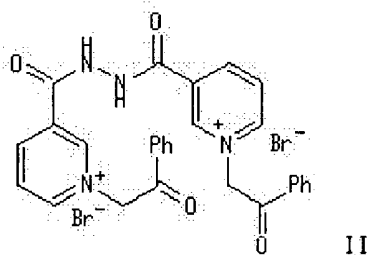
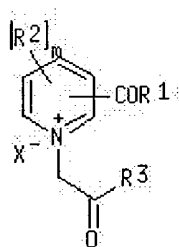
LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025208	A1	20010412	WO 1999-IB1683	19991015
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2344144	AA	20010412	CA 1999-2344144	19991015
AU 9959942	A1	20010510	AU 1999-59942	19991015
AU 769940	B2	20040212		
BR 9913746	A	20020423	BR 1999-13746	19991015
EP 1222171	A1	20020717	EP 1999-973986	19991015
EP 1222171	B1	20040225		
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JP 2003511369	T2	20030325	JP 2001-528154	19991015
CZ 291789	B6	20030514	CZ 2001-1033	19991015
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US 2001018524	A1	20010830	US 2001-801778	20010309
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US 2002103228	A1	20020801	US 2001-995731	20011129
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PRIORITY APPLN. INFO.:

IN 1999-CA828	A	19991006
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WO 1999-IB1683	W	19991015
WO 1999-IB1687	A1	19991015
US 2000-590143	A2	20000609
US 2000-598410	A2	20000621
US 2001-801778	B2	20010309
US 2001-939702	A1	20010828

OTHER SOURCE(S): MARPAT 134:280715
 GI



AB The title compds. [I; R1 = R4R5, NR7NR7R9; R2 = F, Cl, Br, etc.; R3 = R7, OR7, etc.; R4 = NR7R6O, NR7R6NR7, OR6O, etc.; R5 = alkyl, aryl, heteroaryl, etc.; R6 = alkyl; R7 = H, alkyl, aryl, etc.; X = halide,

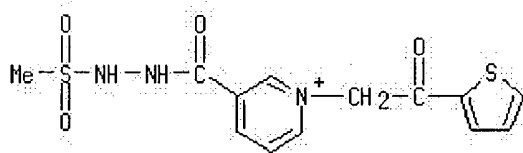
acetate, perchlorate, etc.; m = 0-2], useful for the management of diabetes and aging-related vascular complications, including kidney disease, nerve damage, atherosclerosis, retinopathy, dermatol. disorders and discoloration of teeth, by breaking preformed AGE, were prepd. and formulated. Thus, reacting N,N'-bis(nicotinoyl)hydrazine with phenacyl bromide in MeOH/iso-PrOH afforded 60% II which showed 13% AGE breakage at 5 mM. The invention further discloses a method of treatment of a diabetic patient by administering the compds. I, either singly or in combination with drugs for antidiabetic therapy.

IT 333797-94-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of pyridinium derivs. for the management of aging-related and diabetic vascular complications)

RN 333797-94-7 HCAPLUS

CN Pyridinium, 3-[[2-(methylsulfonyl)hydrazino]carbonyl]-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI) (CA INDEX NAME)



Br⁻

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 14:05:30 ON 02 AUG 2004)

FILE 'REGISTRY' ENTERED AT 14:07:10 ON 02 AUG 2004

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L2 3 S L1

L3 55 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 14:10:24 ON 02 AUG 2004

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L5 8 S L4 AND SANKARANARAYANAN, A?/AU

=> s l4 and comp?

10228579 COMP?

L6 8 L4 AND COMP?

=> s l4 and composition?

921316 COMPOSITION?

1289261 COMPN

516465 COMPNS

1578270 COMPN

(COMPN OR COMPNS)

2030629 COMPOSITION?

(COMPOSITION? OR COMPN)

L7 1 L4 AND COMPOSITION?

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L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Orig References
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ACCESSION NUMBER: 2003:317444 HCAPLUS
DOCUMENT NUMBER: 138:343853
TITLE: Preparation of **compositions** containing pyridinium derivatives for cosmetic and therapeutic applications
INVENTOR(S): Sankaranarayanan, Alangudi
PATENT ASSIGNEE(S): Torrent Pharmaceuticals Ltd., India
SOURCE: Eur. Pat. Appl., 104 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>EP 1304101</u>	A1	20030423	<u>EP 2001-204295</u>	20011112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
<u>AU 766824</u>	B2	20031023	<u>AU 2001-31376</u>	20010328
<u>AU 2001031376</u>	A5	20021003		
<u>JP 2003137783</u>	A2	20030514	<u>JP 2001-344128</u>	20011109
<u>CN 1411809</u>	A	20030423	<u>CN 2001-137440</u>	20011112
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<u>PRIORITY APPLN. INFO.:</u>			<u>IN 2001-CA605</u>	A 20011019
			<u>IN 2001-CA620</u>	A 20011101

OTHER SOURCE(S): MARPAT 138:343853

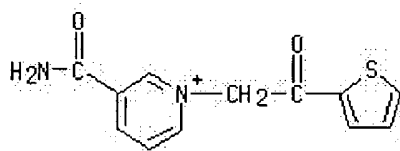
AB The invention discloses a new class of compds. particularly pyridinium derivs., which have been found to exhibit triple function of a free radical scavenger (antioxidant), AGE (advanced glycation end product) breaker and AGE inhibitor, and cosmetic **compn.** comprising these compds. contained in a cosmetically acceptable carrier. The invention also discloses a method of cosmetic application by applying such **compns.** The invention further discloses a pharmaceutical **compn.**, comprising the compds. useful in scavenging free radicals from the body cells of a mammal, a method of scavenging free radicals from the body cells of a mammal and a method of treating of diseases caused by accumulation of free radicals in the body cells of a mammal by administering a **compn.** made with the compds. The invention in addn., also discloses **compn.** and method for inhibiting AGE in a mammal by use of the compds. of the same group. Thus, a **compn.** contained pyridinium compd. 0.25, oleic acid 10.0, propylene glycol 70.0, Tween-80 0.1, and EtOH qs to 100.0%.

IT 333797-27-6P

RL: COS (Cosmetic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **compns.** contg. pyridinium derivs. for cosmetic and therapeutic applications)

RN 333797-27-6 HCAPLUS

CN Pyridinium, 3-(aminocarbonyl)-1-[2-oxo-2-(2-thienyl)ethyl]-, bromide (9CI)
(CA INDEX NAME)

# Br⁻

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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CA SUBSCRIBER PRICE

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FILE 'CAOLD' ENTERED AT 14:12:35 ON 02 AUG 2004

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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L1 STRUCTURE UPLOADED

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L3 55 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 14:10:24 ON 02 AUG 2004

L4 8 S L3

L5 8 S L4 AND SANKARANARAYANAN, A?/AU

L6 8 S L4 AND COMP?

L7 1 S L4 AND COMPOSITION?

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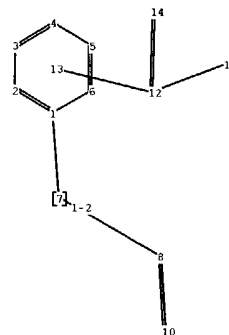
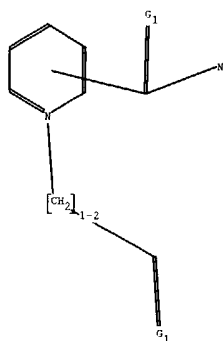
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7 8 10 12 14 16

ring nodes :

1 2 3 4 5 6 19 20 21 22 23

chain bonds :

1-7 7-8 8-10 12-14 12-16

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 19-20 19-23 20-21 21-22 22-23

exact/norm bonds :

8-10 12-14 12-16

exact bonds :

1-7 7-8 19-20 19-23 20-21 21-22 22-23

normalized bonds :

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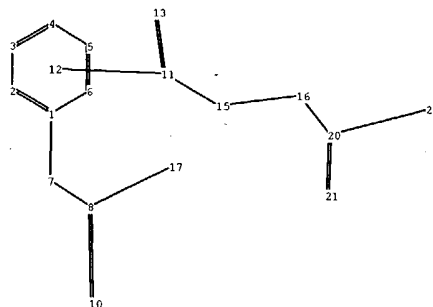
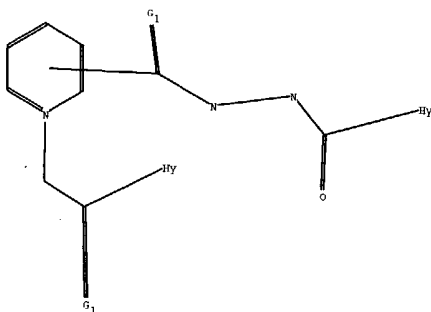
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containing 1 : 19 :

G1:O,S

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 10:CLASS 12:CLASS
13:CLASS 14:CLASS 16:CLASS 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom



chain nodes :

7 8 10 11 13 17 21 22

ring nodes :

1 2 3 4 5 6

ring/chain nodes :

15 16 20

chain bonds :

1-7 7-8 8-10 8-17 11-13 11-15 20-21 20-22

ring/chain bonds :

15-16 16-20

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-7 8-10 8-17 11-13 11-15 15-16 16-20 20-21 20-22

exact bonds :

7-8

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

G1:O,S

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 10:CLASS 11:CLASS

12:CLASS 13:CLASS 15:Atom 16:Atom 17:Atom 20:CLASS 21:CLASS 22:Atom

Generic attributes :

17:

Saturation

: Unsaturated

Element Count :

Node 17: Limited

S,S1

C,C4